



## AMERICAN RESCUE PLAN ACT (ARPA) 2ND ROUND APPLICATION **DUE DATE APRIL 1, 2022**

Please submit a separate application for each project.

### PART 1: CONTACT INFORMATION

**Name(s)** Carol Larson, Steve Benigni, Beverly Clendening

**Committee or Organization (if applicable)**

Arden Trustee (Carol Larson)

Arden Civic Committee (Carol Larson and Steve Benigni)

Arden Forest Committee (Carol Larson and Beverly Clendening)

**Cell Phone** 215-806-5131 (Carol Larson)

**Other Phone**

**Email(s)** [forest@arden.delaware.gov](mailto:forest@arden.delaware.gov), [civic@arden.delaware.gov](mailto:civic@arden.delaware.gov)

**Contact Address(es)**

Carol Larson, 1900 Sherwood Road, Arden

### PART 2: PROPOSAL DESCRIPTION

Please summarize your proposed project in 100 words or less.

**Project Title:** Engineering Design, Project Planning and Implementation for Storm Water Management Plan BMPs E1, E2 and E3

**Project Summary:** ARPA funds are requested to supplement DNREC grants for the engineering design and detailed plans and the installation of all recommended BMPs for Watershed E in the Arden Storm Water Management Plan. The recommended BMPs include the installation of pervious paving on the Pump Path between Harvey Road and Wind Lane, the installation of a bioretention garden at the corner of Wind Lane and Mill Road, a larger bioretention garden located within the leaseholds between 2204 and 2212 Mill Road and an extension to the existing concrete gutter on the southeast side of Mill Road.

---

**Full Project Description:**

Describe your project in detail. Why is this project important to the community? Attach more descriptive information to the end of this proposal as needed.

The Village of Arden Stormwater Master Plan (SMP) developed by ForeSite Associates and funded by a DNREC Storm Water Management Planning Grant was finalized in February 2022. The purpose of this plan is to identify areas within the Village of Arden for implementation of Best Management Practices (BMPs) that reduce the impact of stormwater run-off to the waterways and natural lands that border the village. The Arden Civic and Forest Committees are requesting ARPA funds to supplement DNREC grant funds for the engineering design and installation of BMPs outlined in the SMP.

Community Impact: Beyond the obvious water quality improvements important enough to be funded by state grants, water quality management underscores Arden's mandate from the original founders to value green spaces. With these "best management practices" Arden can lead in demonstrating responsible stewardship of the environment and serve as a model for other communities who need to retrofit infrastructure in order to improve water quality for all Delawareans.

The Civic and Forest Committees are requesting ARPA funds to supplement DNREC grant funds for the engineering design and installation of all recommended BMPs for Watershed E in the Storm Water Management Plan. Watershed E begins along the leaseholds at the beginning of the Pump Path at Harvey Road and flows along the path to Wind Lane where the flow splits, some runoff flows down Mill Lane and the rest flows along Wind Lane to Hillside Road and then down Hillside Road. Along Mill Lane, water travels through leaseholder yards before making its way to Naamans Creek. There is evidence of pavement erosion and sediment deposition along the water flow pathway and particularly at the intersection of Mill Lane and Millers Road. These projects were chosen as a priority for ARPA funding for two reasons. Firstly, we expect to complete all the recommended BMPs on the entire watershed, highlighting the great improvements that result from increased rainwater infiltration and decreased erosion and sediment accumulation when water flow in an entire watershed is managed. Secondly, the recommended BMPs in this watershed will also serve as demonstrations to the community of a range of remediations that the SMP suggests for individual leaseholds. There are three suggested BMPs for this Watershed.

BMP E1 proposes converting the pavement of the Pump Path and the adjoining vehicle access lane between Harvey Road and Wind Lane to pervious paving to allow the capture and managed infiltration of water. Capturing stormwater flow at this high point in the watershed will help prevent downstream transport of sediment and pollutants. Pervious paving options include pervious asphalt, pavers, or concrete. We plan to install two types of pervious pavement to demonstrate two different approaches residents can implement on their leaseholds. We suggest porous asphalt or concrete in the upper and wider part of this path to replace the present asphalt. In the lower part of the path, we suggest permeable interlocking concrete pavers to replace the gravel path.

---

BMP E2 involves the installation of a small bioretention garden at the corner of Mill Road and Wind Lane, which is currently an area where stormwater flowing from areas along upper Wind Lane and Mill Lane leaseholds combine, before rushing down Mill Road. A bioretention garden at this location would benefit drainage by slowing the stormwater flows higher up in the watershed and allowing time for pollutants to settle out. This project also necessitates either installing a valley gutter or re-grading the intersection to channel water into the bioretention garden. Implementation of this BMP will increase infiltration of water and reduce sediment and pollutant runoff to Namaans Creek.

BMP E3 consists of a larger bioretention garden located within the leaseholds between 2204 and 2212 Mill Road (leaseholder permission has been obtained for this project). An extension to the existing concrete gutter on the southeast side of Mill Road will also be needed to funnel stormwater into the bioretention garden and to carry overflow into the drainage system.

There are two distinct phases to the projects we are proposing. The first phase is the detailed engineering design and planning that will be required before we can apply for DNREC funds for the second phase, which is the installation phase. The two phases can be partially funded under different types of DNREC grants. Funding details and ARPA requests for the two phases are explained separately below.

#### Engineering Planning and Design

We plan to submit a proposal for a DNREC Storm Water Management Planning Grant (SWMPG) for BMPs E1, E2 and E3 in July 2022 with funds expected to disburse at the end of 2022. We have been in contact with Jim Sullivan from DNREC who informed us that it is likely that this project will be funded, particularly given the previous completion of the Stormwater Management Plan. The maximum grant award is \$50,000 but grant funds must be matched 1:1 with municipal funds. ARPA funds can be used as matching funds. We have requested bids for this work from ForeSite Associates, Carroll Engineering Corporation, Brightfields, Inc. and Straughan Environmental Services. ForeSite Associates quoted an estimate range between \$55,000 and \$75,000 for the engineering plans for all three BMPs. We met with a representative from Carroll Engineering Corp on Friday, April 15 and are waiting for an estimate. Brightfields, Inc. and Straughan Environmental Services did not respond to our request. Assuming that the actual costs for the engineering design and plans fall in the mid-range of the ForeSite estimate (\$65,000), we will request \$32,500 in SWMPG funds. **We are requesting ARPA funds to cover the \$32,500 match requirement.**

#### Implementation

We plan to submit two DNREC Community Water Quality Improvement Grant (CWQIG) proposals to defray the installation costs of the three BMPs in Watershed E. The maximum grant award for CWQIG is \$75,000 and there is no match requirement. However, the Village of Arden cannot receive funding independently under this grant mechanism; we must be sponsored by the New Castle Conservation District which charges a 10% administration fee.

---

The first CWQIG proposal that we plan to submit has a deadline of April 2023 with funds expected to disburse in July 2023. This proposal will request funding for the installation of BMP E1 and E2. We have bids for the installation of BMPs E1 and E2 from ForeSite Associates and Advanced Ecology, LLC that range from \$80,000 to \$93,800. Assuming 10% administration fee (NCCD) the estimate for installation of these two BMPs ranges from \$88,000 to \$103,180. The actual bidding process under a CWQIG will be done by NCCD, therefore we cannot give a definitive cost for the projects. For the purposes of this request for ARPA funds we are assuming that the final cost will be somewhere midway between the two estimates we received. This would place the cost of installation of these two BMPs at about \$95,590. Using this average, the **costs not covered by the maximum grant of \$75,000 is \$20,5900 for which we are requesting ARPA funds.**

The second planned CWQIG proposal has a projected deadline of October 2023 with funds dispersing in early 2024. This proposal will request funding for the installation of BMP E3. We have bids for the installation of BMP E3 from ForeSite Associates and Advanced Ecology, LLC that range from \$100,000 to \$186,000. Assuming 10% administration fee (NCCD) the estimate for installation of these two BMPs ranges from \$110,000 to \$204,600. Again, because NCCD will handle the bids for this installation, we cannot give a definitive cost for the projects, For the purposes of this request for ARPA funds, we are assuming that the final cost will be somewhere midway between the two estimates we received. This would place the cost of installation of BMP E3 at around \$157,300. **The cost over available grant funds using this average is \$82,300 for which we are requesting ARPA funds.** We have been in contact with Kevin Donnelly from the NCCD concerning these projects and have been informed that the prospect for DNREC funding is very good.

In summary, the Civic and Forest Committees are requesting the following allocations from the ARPA funds

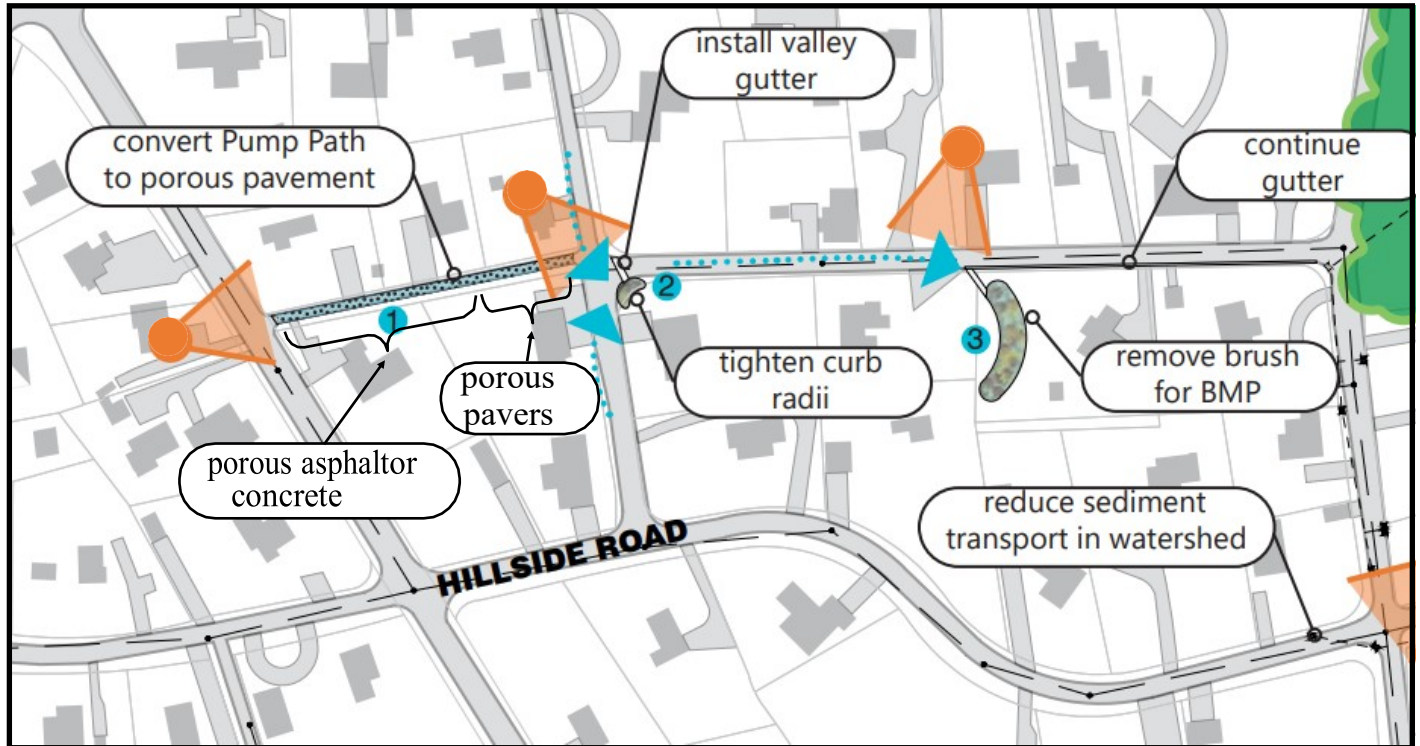
Planning and Engineering Plan costs for BMPs E1, E2 and E3	\$32,500
Installation Costs for BMPs E1 and E2	\$20,590
Installation Costs for BMP E3	\$82,300
<b>TOTAL</b>	<b>\$135,390</b>

It should be noted that all costs embedded in this proposal are preliminary estimates and that the availability and timing of disbursement for DNREC grant funds is subject to change. If any of the actual costs turn out to be greater than those estimated here, or if DNREC funds are not available, the Civic and Forest Committees could request the needed funds from the Vacant Housing Fund.



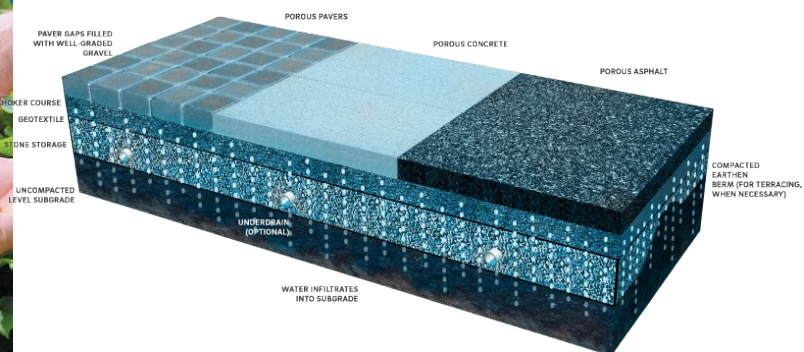


Watershed E Overview



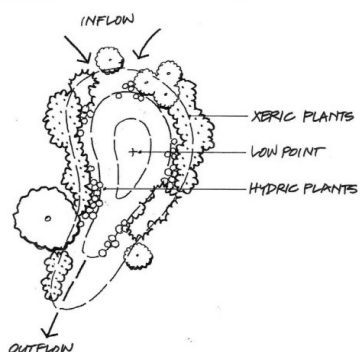
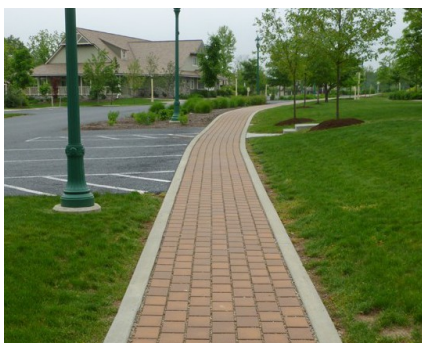
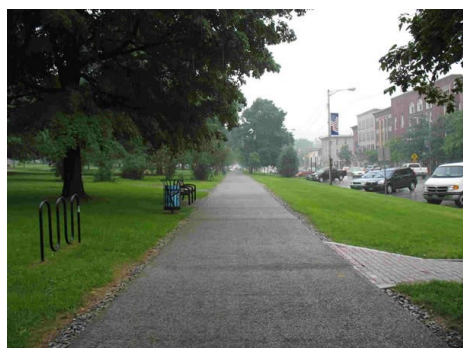
Watershed E Map





Pervious Paving

## Bio Retention Gardens



## PART 3: PROJECT ADMINISTRATION

### **Project Administrator(s)**

**Name** Carol Larson

**Title** Village of Arden Trustee, Arden Civic Committee and Arden Forest Committee

**Email** carol2339@verizon.net

**Phone** 215-806-5131

**Estimated start date**

September, 2022

**Estimated end date**

December 2024

---

---

**VILLAGE OF ARDEN AMERICAN RESCUE PLAN APPLICATION**

## PART 4: PROJECT COSTS

What are the estimated costs of the project? Please attach a minimum of two (2) bids from contractors to this application.

### Planning Phase

#### Bid #1

##### **Name of Contractor**

Foresite Associates, Inc.

##### **Estimated Cost**

\$55,000 - \$75,000

##### **Pros & Cons of this Bid**

Pros: Arden has completed several projects with this contractor and has been satisfied with the work. ForeSite Associates is highly recommended by both DNREC and NCCD. The company shares Arden's concern for sound environmental management and has a progressive, forward-thinking approach to projects. This company can handle all aspects of the work, including grant writing.

#### Bid #2

##### **Name of Contractor**

Carroll Engineering, Inc

##### **Estimated Cost**

pending

##### **Pros & Cons of this Bid**

Pros: Can handle all Engineering and Planning aspects of these projects

Cons: We have not worked with this company in the past and they do not project the same concern for larger environmental issues.

---



---

**VILLAGE OF ARDEN AMERICAN RESCUE PLAN APPLICATION****Installation Phase****Bid #1****Name of Contractor**

ForeSite Associates, Inc.

**Estimated Cost**

\$279,800

**Pros & Cons of this Bid**

Pros: Arden has completed several projects with this contractor and has been satisfied with the work. ForeSite Associates is highly recommended by both DNREC and NCCD. The company shares Arden's concern for sound environmental management and has a progressive, forward-thinking approach to projects. This company can handle all aspects of the work, including grant writing.

Cons: Estimate is high compared to other.

**Bid #2****Name of Contractor**

Advanced Ecology LLC

**Estimated Cost**

\$180,000

**Pros & Cons of this Bid**

Pros: low estimate; Representative was knowledgeable and willing to take on all three projects.

Cons: This company does not do engineering design or grant writing. We do not know if the company is eligible for a bidding through NCCD

What, if any, are the recurring maintenance costs for this project?

Cleaning and maintenance of pervious paths and bioretention gardens and possibly the purchase of ground vacuum for pervious pavement.

Are there outside sources of funding expected for this project? If so, please describe below.  
Initial funding via DNREC SWMPG and CWQIG with possible additional funding through Municipal Street Aid

---

---

**VILLAGE OF ARDEN AMERICAN RESCUE PLAN APPLICATION**

## PART 5: CONFLICT OF INTEREST

Please describe any potential conflict of interest here for the Project Administrators or the Contractors of this project. For more information use this link to Arden's Conflict of Interest Policy: [https://arden.delaware.gov/wp-content/arden\\_docs/ConflictOfInterestPolicy.pdf](https://arden.delaware.gov/wp-content/arden_docs/ConflictOfInterestPolicy.pdf)

NA

## PART 6: SUBMISSION

Attach further information as needed.

**Return no later than April 1, 2022** to the Arden Community Planning Committee at [Planning@Arden.Delaware.gov](mailto:Planning@Arden.Delaware.gov). Or mail to: Arden Community Planning Committee, 2119 The Highway, Arden, DE 199810-4058.

Contact Jennifer Borders, Chair Community Planning Committee, for questions at [Planning@Arden.Delaware.gov](mailto:Planning@Arden.Delaware.gov).

---